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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,433	02/07/2002	Constantinos J. Joannou	JOANN - 10 . US	7877

7590 03/24/2004

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EXAMINER

VERSTEEG, STEVEN H

ART UNIT	PAPER NUMBER
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1753

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/067,433

**Applicant(s)**

JOANNOU, CONSTANTINOS J.

**Examiner**

Steven H VerSteeg

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/17/03
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: IDS mail date 12/9/02

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The reference crossed out is a duplicate of a reference already cited. Also, please note that you are using the wrong form. To cite references, please use PTO-1449. The form that you are using is the form that I use to cite references.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 7 depends from itself and is therefore indefinite.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-6 and 8-11 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,632,407 B1 to Lau et al. (Lau).

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7. For claim 1, Applicant requires a battery operated ionizer comprising a battery connected to provide low voltage current to an electrical circuit; an oscillator circuit within the electrical circuit powered by the battery for driving a voltage conversion circuit to provide an ionizing voltage to an output capacitor means; an ion-emitter connected to receive charge from the voltage conversion circuit and output capacitor means; and a counter-electrode connected to said electrical circuit, wherein said oscillator produces intermittent oscillations such that the voltage established at the output capacitor means is an ionizing voltage and wherein, ion emission continues during the time the oscillator is not producing oscillations, supplied by charge from the output capacitor means.

8. Lau discloses a battery operated ionizer comprising a battery **B1**, oscillator circuit **190** for driving a voltage conversion circuit **210** to provide an ionizing voltage to an output capacitor means (Figure 3a), an ion emitter **160**, and a counter electrode connected to the electrical circuit (col. 5, l. 30-51). The oscillator produces voltage oscillations and the ion emission continues during the time the oscillator is not producing oscillations (col. 8, l. 43-56).

9. For claim 2, Applicant requires the voltage conversion circuit to comprise a high voltage step-up transformer. For claim 3, Applicant requires the voltage conversion unit to comprise diode-capacitor multiplier network driven by the transformer. Lau discloses the conversion circuit to be a high voltage step up transformer **T1** with a multiplier network **210**.

10. For claim 4, Applicant requires the voltage conversion circuit is a first high voltage producing network for providing a positive or negative polarity DC output, and wherein said ionizer further comprises a second high voltage producing network for producing an opposite polarity DC high voltage to that of said first network, said second network being connected to

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said counter-electrode. Lau discloses two high voltage producing networks in which one is positive DC and the other is negative DC (col. 7, l. 44-55; col. 6, l. 48-62).

11. For claim 5, Applicant requires the ion emitter to have a negative voltage to produce negative ions. Lau discloses negative ions produced (col. 10, l. 4-14).

12. For claim 6, Applicant requires conductive connection means whereby a human body can be electrically connected to serve as the counter electrode. Lau uses a flexible cord **101** to connect the system to a human.

13. For claim 8, Applicant requires the counter electrode to have a cleanable dust collecting surface. For claim 9, Applicant requires the ion emitter to be carried by a base and the dust collecting surface to be mounted from the base to permit air to flow to pass by the ion emitter and then to the cleanable dust collecting surface. For claim 10, Applicant requires the dust collector to be mounted in a spaced relationship to the ion emitter and carried by support means extending from the base with the counter electrode detachable from the base and support means to permit cleaning. For claim 11, Applicant requires the dust collecting surface to be above the ion emitter. Lau discloses a dust collecting surface (col. 9, l. 19-25) and the location of the dust collector and ion emitter as claimed by Applicant (Figure 4A-4N).

### ***General Information***

For general status inquiries on applications not having received a first action on the merits, please contact the Technology Center 1700 receptionist at (571) 272-1700.

For inquiries involving Recovery of lost papers & cases, sending out missing papers, resetting shortened statutory periods, or for restarting the shortened statutory period for response, please contact Palestine Jenkins at (571) 272-1021.

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For general inquiries such as fees, hours of operation, and employee location, please contact the Technology Center 1700 receptionist at (571) 272-1300.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven H VerSteeg whose telephone number is (571) 272-1348. The examiner can normally be reached on Mon - Thurs (6:30 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Steven H VerSteeg  
Primary Examiner  
Art Unit 1753

shv  
March 18, 2004